ISSUE 162 MARCH 2024

KNOTTING MATTERS

The Magazine of the International Guild of Knot Tyers

INTERNATIONAL GUILD OF KNOT TYERS

The International Guild of Knot Tyers (IGKT) is a registered UK Charity No. 802153

PRESIDENT
Mikko Snellman
e-mail: president@igkt.net

HON SEC
David Bodger
e-mail: secretary@igkt.net

IGKT POSTAL ADDRESS
IGKT
Oaken Cleave, Cobbaton,
Umberleigh, EX37 9SG, UK

MEMBERSHIP SECRETARY
Caroline Sandrey
15 Spey Close, Thornbury,
Bristol, BS35 2NR, UK
e-mail: membership@igkt.net
www.igkt.net

Items intended for the website should be submitted to Colin Byfleet at cr@byfleet.org

ISSN 0959-2881
Printed by Gipping Press Limited.
Tel: 01449 721599

Subscription Rates	
	/year
Juniors (under 18)	**£5**
Adults	**£26**
Family	**£30**
Group (min 10)	**by arrangement**

KNOTTING MATTERS

THE MAGAZINE OF THE INTERNATIONAL GUILD OF KNOT TYERS

EDITORIAL BOARD
Gregg Blain
Rich Cifelli
Steve Drew
Barbara Frankel

Publication Postal Address
Knotting Matters
Silverwood House
Old Avenue, Weybridge,
KT13 0QA, UK

The editors welcome the submission of letters, articles, photographs and sketches for publication. Correspondence may be by e-mail knottingmatters@igkt.net but more extensive items, such as articles for publication, as well as any pictures, which should be of good quality, need to be sent as attachments. All submissions must include the author's name and e-mail or postal address.

To publicise events in *Knotting Matters*, note March, June, September and December are the months of publication. Although the deadline for the next issue is given at the foot of the Contents page, please note that the editors begin putting it together at least three weeks earlier.

Except as otherwise indicated, copyright in *Knotting Matters* is reserved to the International Guild of Knot Tyers, IGKT 2024. Copyright of articles published in *Knotting Matters* is reserved to the authors and permission to reprint should be sought from the author and the editor. All sources of quotations printed in *Knotting Matters* are hereby acknowledged.

KNOTTING MATTERS

Issue 162 March 2024

3 Editorial

4 Editor's Bio

5 Letters to the Editors

12 Sokol Constrictor Knot

13 The Lacing Needle

17 A New Knot?

19 Custom Cord Sources

21 Musings on a Lifetime

24 A Knotted Fractal Mat

27 Ground Work

36 News from the Branches

42 2024 IGKT AGM

43 Obituaries

44 Chapter Contacts

HELP WANTED

Got WEB Skills? The IGKT could use your help maintaining the IGKT.NET website. Contact — secretary@igkt.net

Book Reviewers Needed — Check out https://igkt.net/goods-4-sale for the books and other items currently for sale. Many books are waiting for your review to be published in a future edition of *Knotting Matters*.

PLEASE NOTE: LETTERS AND ARTICLES FOR THE JUNE 2024 KNOTTING MATTERS MUST BE RECEIVED BY 1ST OF MAY 2024

FRONT COVER: LEATHER BRAIDED PENDANT BY HOOEY MICHAELS. **SEE P 21**

Editorial

As this edition of *Knotting Matters* hits the post, we are already a few months into the arbitrariness of a 'New Year' and most of us have happily ditched the resolutions that were laced with misplaced oughts and shoulds so that we can concentrate on living the life that hopefully brings us more of what we want and a whole lot less of what we'd rather not deal with in the first place. My wish is that *Knotting Matters* will provide a forum for the contributors to pass on their hard-earned knowledge and for the readership to connect with the people and resources needed to further their unique interests and passions about the history and current state of knots, ropework, and the multitude of related fields.

After several thousand years of looping and crossing, the world of knot tying is still evolving and progressing. This edition brings two articles on recently discovered knots: a hitch adapted for binding bundles of long, roundish objects and a cinching bend for joining two ropes of differing materials. Rob Chisnall, p 27, details an essentially unlimited well of inspiration for variations in rope rugs, and Hooey Michaels, p 21, shares his personal journey of adapting knotting knowledge gained throughout his diverse experience to his current passion of leather braiding.

This issue also includes resources for the beginning and advanced knotter: an article on where to locate those hard-to-find custom cords and a tutorial on lacing needles were provided by the newest member of our editorial team, Rich Cifelli, p 19. Incidentally, the compilation of references at the end of Rob Chisnall's article on rope rugs is an interesting reading list in its own right...

Then let us not forget the most valuable resource of all: the personal connections forged between us as we pursue our shared interest in knotting within the IGKT community. I encourage you to share your unique perspective and knowledge by submitting an article or letter to *Knotting Matters.* I also invite you to expand your personal network, whether by participating in the online or social media platforms, or by attending one or more of the events listed in this issue. The Yorkshire Branch has upcoming functions in March and November of this year, and the 2024 IGKT Annual Gathering will be held in May at Hartlespool. Advance notice is given for the exciting Australian Boat Festival at Hobart in February 2025.

— Cheers and hope to see you somewhere along the way... Gregg Blain

Editor's Bio

I spent most of my so-called 'formative years' in Maryland; my father worked at the Smithsonian Institution, where I was to later (1983–1985) hold a position as Fellow-in-Residence. Following college and graduate training, I briefly worked in Flagstaff, Arizona, before moving on to the University of Oklahoma, where I taught in the departments of Zoology and Geology & Geophysics and worked as a paleontologist at the university museum (1986–2020). My specialty was early mammals and I traveled widely for field work.

Before preparing these brief remarks, I scanned a few back issues of *Knotting Matters*, chuckling to myself when I found that others, too, got their first exposure to knots in scouting, where I picked up a few of the basics. Too bad I didn't pursue knotting then, when I was capable of remembering what I learned—but then again, there is some consolation in the fact that re-learning knots now, which I have to do every time I put something down for more than a few days, is like discovering them anew. In any case, my interest in knotting remained largely dormant for some decades. I worked briefly (1977) as a longshoreman in Alaska; at some point when not hip deep in dead salmon, I borrowed a copy of *The Ashley Book of Knots* and, among others, tied my first monkey's fist.

I describe myself as a wannabe craftsman. I've long been a woodworker, mainly building simple pieces of furniture that don't have too many weird angles and turning simple bowls and tool handles. Recently, I've gotten into restoring (and using) straight razors, fitting them with wood, bone, or horn scales. I do some metalworking, mainly welding. And then, of course, there is knotting, at which I am definitely a novice. I hope that my enthusiasm may, in part, compensate for my slim background in knotwork when it comes to editing our magazine.

I did a fair amount of editing scientific journals in connection with my professional career, although the publishing landscape has changed considerably in the 10 or so years since my last formal engagement as such. Thankfully, the rest of the editorial team has been very patient as I try to get up to speed with the technical aspects of producing *Knotting Matters* in the 21st century. I am grateful for the opportunity to help out in whatever small way that I can. I see the work as a fantastic opportunity to learn about knotting and the International Guild of Knot Tyers, and to meet and interact with you, its members.

— Rich Cifelli

Letters to the Editors

Dear Editors,

Well done all!

To Splice or to Tuck, that is the question.

Our number four bell rope was at breaking point below the sally a few months ago so I cut it and spliced it back together with a 3 x 3 straight splice; we knew that the tail would have to be repaired but that splice has done a good job. However, this week I took it down and sent it off to Avon Ropes to splice on a new tail.

Why this letter? In my communication with Philip the question came up as to whether the tail has an eye splice or is tucked up Devon style.

Well all our ropes are 'tucked' but then in my experience the vast majority of towers 'tuck' so why it is called 'Devon' style? I have no idea.

But this brought to mind one of my little annoyances! The so-called tucking up is the (whipped) end being passed under a single lay or strand of the rope 'tail'.

Most people who do this make several 'tucks' and the principle is good because the tails can be adjusted for/between short and tall ringers if needed.

However if there are e.g. three tucks they should be made under different strands or lays; if all tucks are under a single lay in a three lay/strand rope then that will strain that lay and not the other two likely causing premature failure in a natural fibre rope.

All our ropes are natural fibre through the sally and below the tail.

Another solution must be possible; a single eye splice was okay in the days when a ringer had 'his bell' but does not allow for adjustment so that many ringers can get experience of ringing a bell.

On another, but related, note — my Scout troop is learning to eye splice making 'troop ropes' as issued to the Marines; an open eye splice one end and a tight eye splice holding the toggle in place at the other.

Good knotting,
Richard Norman (Devon, UK)

Dear Editors,

In the December 27th edition of *Country Life* magazine, there was an article on rope making and knotting. Unfortunately the reporter seemed to believe that the Six Knot challenge was the same as the Surrey Six.

This is not the case and the true Six Knot Challenge requires competitors to tie the six basic Tenderfoot knots of the Scouts and is the same selection of knots for which there is a Guinness world record. Scouts have been tying knots in competition ever since Baden Powell invented the organisation and the Guinness record holder had been a keen Scout all his life, achieving his record five years before the Guild was established.

The original knots were of course tied in natural fibre cordage, but somewhere in the late 1990s or early 2000s Howard Denyer, then Chairman of the Surrey Branch of IGKT, thought that members should be able to select knots more suited to tying in the synthetic ropes that were now common. Thus the 'Surrey Six' was born and is noticeably different from the traditional Six, although three of the knots are the same.

As I understand it, the traditional Six Knot Challenge was developed from a display on a rope manufacturer's stand at a boat show visited by Ken Yalden. The public was invited to tie the six knots against the clock.

Ken saw that this could be fun for Guild members and set up a rig to use in Solent Branch. He demonstrated it at a few Guild events and when the Guild made its first large scale appearance at three sites for the Tall Ships Race in Weymouth in 1994, two rigs were present on the sands so that crews from the ships could compete. A lad from one ship was in fierce competition with a girl from a different vessel. After three days he got down to 16.5 seconds and she then proceeded to reach 18 seconds blindfolded. These were the first IGKT records. The vessels came from all over the world and the idea was copied by several organisations after the race finished.

The following year a sailor in Penzance achieved 17.5 seconds but could have been quicker. He had lost a finger and was trying to use the missing digit to push ends through. By early 1997, Peter Souber, an American academic who had an excellent site "Knots on the Web" proposed a set of rules for the Six Knot Challenge which were in due course submitted to the Guild for approval and these rules are more or less the same as apply today.

It has been found, however, that when members of the public hear how fast they need to tie the knots in order to break the record their willingness to participate dwindles.

The rigs do serve as an eye catcher when at demonstrations and also serve as a useful teaching aid both on a one-to-one basis and to a group. IGKT France has their own version but do not run it competitively, but in Canada there are (or were seven years ago) two very fast scouts trained by Dave Lambert who has also tied the knots in 11.3 seconds on video and possibly faster in private.

Other organisations have copied the idea and I know of someone who wanted to run the Challenge for firemen at a trade show and I have seen a similar set up for arborists and tree surgeons at a local arboretum using trade-specific knots.

There is no copyright on the rules or the competition but if it is to be called the Six Knot Challenge and refer to the Guinness World record it must use the original tenderfoot knots. These are: reef knot, clove hitch, sheepshank, round turn and two half hitches, sheet-bend and bowline. By contrast the Surrey Six are: bowline, sheet-bend, round turn and two half hitches, figure eight, constrictor and rolling hitch.

My connection with the Six Knot Challenge stems from being 'volunteered' by Ken Yalden to run the Challenge at the half yearly meeting in Farnham in 1994. I subsequently built my own rig and used it first about a month later at the Tall Ships event at Weymouth, then at West Country Knotters events, the Festival of the Sea in 1996 in Bristol Docks and at Navy Days.

Since then, the rig, with modifications, has been at events around the country and even as far as Brest when a group of us, dressed in late 1880s naval uniform, demonstrated at their big regatta.

My own time for the six knots varies but a few years ago I was consistent at 12 seconds which I feel could be shaved a bit as I had to operate the clock myself both before starting and after completing the last knot.

Richard Hopkins

Dear Editors,

In the Maritime Museum in Devonport, Tasmania, there is a stock standard ship's bell with a rather plain khaki coloured bell rope. The bell is inscribed with the ship's name, *Jean*, and a notice nearby invites visitors to ring the bell. And thereby lies a tale, or rather two tales.

The *Jean* was a naval vessel on patrol in the Mediterranean during WW1. She went missing and a search was conducted. Only one trace of the lost lady was found, the roof of the wheelhouse holding the bell. It is presumed a mine had been encountered resulting in the loss of all the crew.

Somehow or other the bell found its way to Tasmania and finally to the museum. There it was mounted on a wall bracket and the notice hung beside it. Apart from the invitation to ring the bell, the notice asks the visitor to remember the seamen lost in that conflict and others who went to sea but never returned.

When I first came across this exhibit, the bell rope at the time was no more than a largish key fob, totally unsuitable in my not-so-humble opinion. I approached the staff and volunteered to make a proper one, and the offer was immediately accepted. As I drove home I pondered on what sort of bell rope would suit this particular and rather special bell.

I immediately ruled out any bright colours and very fancy knotting. The latter was an easy decision as my skills in that area are limited. I wanted to make a plain piece that would not draw attention away from the bell and the notice. I knew I had plenty of white synthetic braid of different thicknesses but could easily become grubby with many hands applied to it.

Back in Hobart I searched through my collection of knotting materials and found a spool of khaki coloured braided linen cord that I had won in the lottery at the 2002 Guild meeting in Fareham. The spool had been donated by Darren Samphier who had carted it from Melbourne to England, and then I carted it back to Tasmania. It was an excellent material for the task and easy to work. The piece was quickly built and I soon returned to Devonport to have it installed.

So those are the two tales. A sad survivor of conflict and a happy set of circumstances resulting in a suitable tribute.

Frank Brown—Belle Jean

Belle Jean

Dear Editors,

'Fishing For Success' (F4S) recently joined IGKT as a group member. F4S is a nonprofit social enterprise and volunteer-based community museum that works to transmit the intangible cultural heritage of Newfoundland & Labrador's family fishery. We advocate for an inclusive, gender-equitable, and sustainable small-scale fishery that can help combat climate change and contribute to food sovereignty through better local seafood access. We provide free or reduced cost programming for women, children, youth, newcomers, and Indigenous community members by partnering with other like-minded nonprofits. We work to make space in the boat for everyone! We also have a thing for ropework and knot tying, too.

Most recently, youth groups have learned how to weave withes, sailors knots into trivets and wreaths, and used the Matthew Walker knot to make sailor's whisks. Check out www.fishingforsuccess.org or email us fishing@islandrooms.org Tourism provides the revenue to fund our community programs, and visitors love trying their hand at sailors' work, too!

— Kimberley Orren

Dear Editors,

I thought you might find this useful as a filler: https://bit.ly/KM162

'The smallest known molecular knot' is more of a mathematical knot than our sort. You may have seen the one tied in a protein strand—actin if I recall correctly—that was reported in KM several years ago. That was our sort.

Cheers, Frank Brown

Dear Readers,

It was brought to my attention that IGKT member Brian Taylor (MRM) was named Fraser Coast Australia Day Volunteer of the Year 2024 for his long standing contributions to the Hervey Bay Historical Village & Museum.

We are proud to have so many talented IGKT members that volunteer their time, experience, and love of knots.

Please join us in congratulating Brian for this well deserved accolade.

— Steve Drew (via Barbara Frankel)

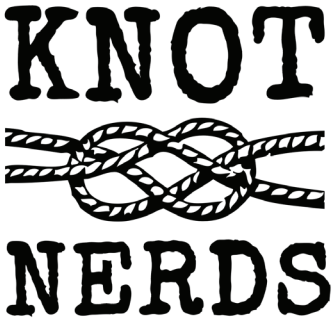
Editors Note: We love fillers! We invite all to share any tidbits that come their way.

Dear Editors,

I am so pleased to have randomly found this group of people who just appreciate everything about knots. I recently discovered and joined the IGKT in November 2023. All the resources that are available online are just fantastic, easily worth the cost of membership. Though online resources and newsletters are helpfully accessible, I really have enjoyed the hardcopies of the two issues of *Knotting Matters* that I have received so far!

I am from Newfoundland, Canada and am a Member of the International Alliance of Theatrical Stage Employees (IATSE) in the Grip Department in the film industry. Though making movies these days often times involves advanced technologies, I continuously enjoy the fact that some of the oldest technology is being used side by side the new. You could try, but you can't make movies and television without knots. There will always be something on a film set that needs to be tied down or rigged up with rigging rope, cord or sash.

I have started a drop-in session on the first Friday of each month at the Newfoundland IATSE office for our Members who want to learn some knots or just nerd out about knots. Based on how many knots puns are in *Knotting Matters* you will no doubt enjoy the name I came up for the info sessions, Knot Nerds (See my logo, right). Perhaps someday my drop in information sessions will become more formal and the IGKT will have a Newfoundland chapter!



Looking forward to every future issue of *Knotting Matters*!

— Zoe Dempster

Dear Editors,

Prior to the COVID-19 pandemic, I found great satisfaction in sharing knot-tying skills and spreading the word about IGKT at every opportunity. Other members may recognize that they, too, have similar intervals of idle time and begin to notice how often people are sitting idle with total strangers, waiting for goods or services.

Sitting in a hospital waiting room, pharmacy, or even waiting for a table in a busy restaurant with cord in hand, biding my time tying loops and bends in plain sight of others who may be bored, or perhaps worried about their situation, has

afforded countless opportunity to share just a bit of rope knowledge and to gift a freshly-cut segment of cord to anyone who expresses an interest in "whatever I may be doing with a piece of rope in my hand."

My interests have focused on working with rope and cord around my home and small farm. My former coworkers at a petroleum refinery have collectively taken home spools of cord that I have cut into lengths of 3–5ft for sharing. Having knowledge of perhaps five or six different applications allows for a person to have an extra pair of hands when no one else is available. And I never fail to mention IGKT as a resource for further information.

How better to break the ice in a room full of strangers and make new friends than to pass the time fiddling with cord? With the youngsters' eyes on me, I always speak to the adults first before engaging. "Hi, I am Tom Borden, a member of the International Guild of Knot Tyers, and we try to keep the skill of knot tying alive by sharing our knowledge with others."

I can't play wonderful music on the piano in a busy public corridor or create chalk drawing on the sidewalk that make people hop or skip, but it sure feels great to see a smile on a face or a sparkle in the eyes of another who may be starting a new, lifelong interest in the age-old practice of using cord as a tool.

— Tom Borden

Dear Editors,

My community sailing club (Sailing Academy) has knots and rope work in its ongoing education program. We develop knot-tying topics and promote the World Knot-Tying Day in December each year by holding district championships. In a fun way, but also seriously. In December 2023, the youngest participant was 2-year-old Mateusz, who tied the knot on his own and won the cup for the youngest. Franciszek turned out to be the fastest tyer and defended the title of district champion in 2022. Tying knots and knowledge about ropes and their various uses is one of the pillars of education for children and teenagers. We are proud to be members of the Guild.

Patryk Rozanski
AKADEMIA ZEGLARSTWA, Poland
kontakt@patrykrozanski.pl

The ‘Sokol Constrictor Knot’

by Jiří Braný

Introduction and Characteristics—This knot is a form of hitch I am calling the sokol constrictor knot. It is especially useful for tying elongate, semi-cylindrical objects into a bundle. It resists being loosened and can be pulled tighter and tighter as required yet loosens easily when tension is released from inside (as, for example, when one or more of the objects is removed). Remove whatever it surrounds, prior to adding the final half-knot, and it resolves into a couple of overhand knots. To secure the knot after finishing, tie a second overhand knot, completing the reef knot (or granny knot). It is not a symmetrical knot, so tension on the two sides (each line) of the knot will differ.

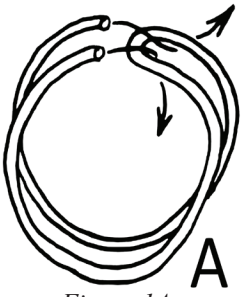


Figure 1A

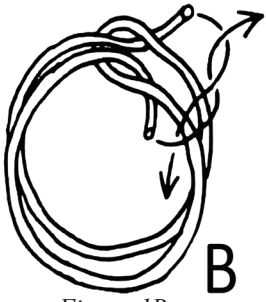


Figure 1B

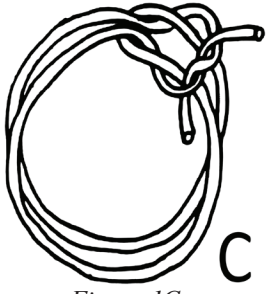


Figure 1C

Instructions for Tying—We start the sokol constrictor knot by making an open loop around the object or objects. The two working ends then go over the base of the loop, split, and go under adjacent sides of the loop (Figure 1A). Bring the two working ends back together over the loop and tie them in an overhand knot (Figure 1B), then tighten to desired tension (Figure 1C). The sokol constrictor knot is demonstrated in a YouTube video, accessed through the following link:

https://www.youtube.com/watch?v=PDSZggea2Hg

Meaning of ‘Sokol’—Sokol is an organization where kids learn gymnastics, living in the open and many more skills. Sokol started in 1862 in Prague in the Czech Republic (then part of the Austrian Empire) and spread to 18 other countries all over the World. I name this knot for the Sokol Organization and its members. In addition, the Czech word sokol means ‘falcon,’ a bird that never releases what it has in his claws, and hence a fitting name for this knot.

The Lacing Needle

by Rich Cifelli

A few months ago, I went down a Turks head rabbit hole. I doubt that my experience is unique. The number of articles, videos, and even whole books on the subject makes me wonder if some people spend their waking time tying Turks heads, and their sleeping time dreaming about them.

Anyway, once I got to the point where it was hard to fit the parts easily on a few fingers or a hand, I followed the lead of my go-to YouTube sources and went over to using a mandrel and, the subject of this short piece, a lacing needle. Looking online, I quickly found that there are two basic types: one with a couple of rear-placed, forward-directed prongs or barbs, which hook into the material being pulled; and the other with a threaded hole at the rear ("threaded needle" hereafter; sizes refer to the diameter, in mm, of a screw that fits the respective threads; the actual size of the hole is smaller). The pronged variety is most commonly used for leather, a medium I have yet to work with, and because knotters and braiders in all of the videos I saw used threaded needles, I picked that option.

Threaded lacing needles

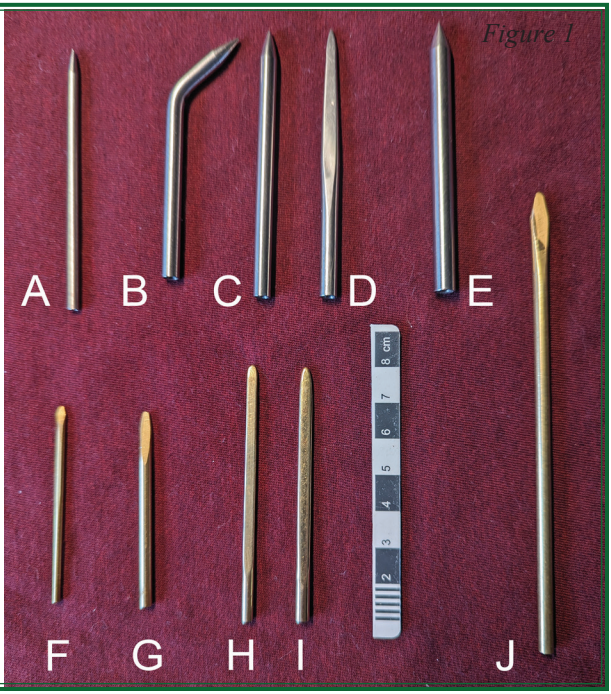


Figure 1

Figure 1: Top row, stainless steel. **A**, 2mm; **B–D**, 3mm in angled (**B**), cylindrical with conical tip (**C**), and lanceolate (**D**) styles; **E**, 4mm. Bottom row, brass. **F**, 1mm; **G**, 2mm; **H**, 1.6mm; **I**, 2.5mm; **J**, 3mm. **F**, **G**, and **J** have modified (ground) tips and are Perma-Loc needles; **H** and **I** are flattened and rounded to the threaded end and are Fogliadoro needles.

Threaded lacing needles come in several different metals, the most common of which are brass and stainless steel. Not knowing which would best suit my needs, I got a few of each. Judged by their online presence, the stainless types appear to be most popular and seem to be particularly favored by paracorders; in fact, they are commonly called 'paracord fids.' I have found them in 2, 3, and 4mm sizes (Figure 1, top row), with some packages including all three, and with two or more styles in the 3mm size.

By far and away the most useful of these, in my opinion, is the straight 3mm x 80mm lanceolate threaded needle, which sports a pointed tip and laterally-compressed shaft and point (Figure 1 D). The flat blade inserts readily between even closely-spaced leads; turned on edge, it can be used to open spaces, and the blade-like shape makes this a useful tool for manipulating or tightening parts of a braid or knot. Obvious advantages of stainless-steel threaded needles are their great strength and resistance to oxidation. On the negative side, the 3mm and 4mm needles are of heavy construction; the 4mm models (Figure 1 E), for example, have an outside diameter of 6mm. That makes these rather heavy and, to me, clumsy to use.

More significant is the fact that, because stainless steel is relatively hard, these needles are not easily modified. Thinning or shaping the point requires patience, a grinder, and some effort with grades of sandpaper or whetstones; drilling and tapping to re-size is possible but difficult. Also, when dropped on concrete or tile floor, the points get small but sharp spurs that can catch and quickly ruin synthetic cord having a thin, finely-braided sheath (like paracord). A useful modification for stainless lacing needles, particularly the lanceolate one I favor, is rounding of the tip and edges. My hands-down best tool for this job (and for shaping and polishing the surface on all my metal knotting implements) is a fine-grit deburring wheel mounted on a grinder.

Brass needles (Figure 1, bottom row) are more costly than the stainless versions; the most commonly- available in the US is the Perma-Loc line, which includes sizes of 1, 2, and 3mm. By far the best (but most expensive), in my view, are made by Fabio Fogliadoro (Figure 1 H, I) and marketed through Kruger EDC, Sweden; the only size currently available is about 2.5mm. They have a compressed shaft, blunted point, and exceptionally smooth, well-rounded edges. Fogliadoro needles are a delight to work with.

Brass needles tend to be slimmer (and therefore lighter) than their stainless counterparts (compare Figure 1 J with B–D, for example), and I also find them easier to handle and pass through a series of leads. Owing to the softness of the metal, brass lacing needles are easily modified: the point and shaft can

RESIZING A LACING NEEDLE

Figure 2: The threaded hole of this 1.6mm needle is being enlarged 25% to accommodate 2mm hard-laid cotton cord. Left, needle is mounted in a block of aluminum (secured with a set screw, not visible), held in a milling vise, and drilled using a 1.6mm bit mounted in a drill press. Right, M2-0.4mm threads being cut (tap, made of brittle high-speed steel, is held in pin vise rather than tap holder to lessen possibility of breakage).

Figure 2 Left

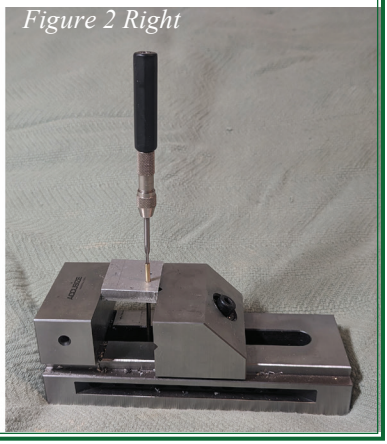


Figure 2 Right

be shaped with common hand tools and abrasives, and they can be bent or straightened as needed. Furthermore, where walls are of sufficient thickness, it is possible to drill and tap (cut threads) to slightly larger size, as needed (Figure 2). Finally, a nicked or spurred tip on a brass needle is easily smoothed with sandpaper or a nail file—or, in a pinch, on a concrete floor.

The threads of a lacing needle hold material surprisingly well: you simply twist the material clockwise into the rear hole. The end of leather lacing is cut at an angle before threading; in this way, a 3mm needle can hold a piece of leather that is substantially larger. Similarly, the end of a synthetic cord can be melted and tapered as needed, allowing you to use a light needle with thicker cord. Natural fiber is another matter. Here the ends must be taped, both to prevent unraveling and (for limp cord) to give support, and except for the modest compression of spongy material achieved by tight taping, the cord can be no thicker than the diameter of the threaded hole. In my view, the most useful modification of a threaded lacing needle is the addition of a wide chamfer to the mouth of the threaded hole (Figure 3). This helps guide and compress the material as you push and twist it in. Any fluted chamfering bit will do the job. A bit with a hexagonal shaft can be mounted into a hand-driver; an electric drill

is unnecessary, but if you go this route, easy does it! The handiest item for the job is a flash hole deburring tool, but unless you reload your own ammunition, you're unlikely to have one lying around.

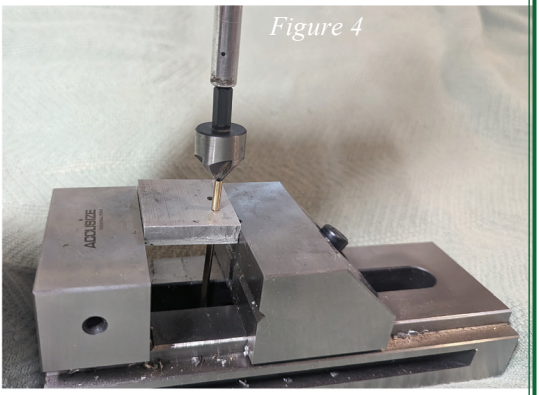
These days I am mainly using hard-laid cotton cord in smaller diameters (1–2.5mm). Because I prefer to use a needle that is closely matched to cord diameter and have a tendency (to the point of obsession) to modify tools where possible, I have a strong preference for brass lacing needles.

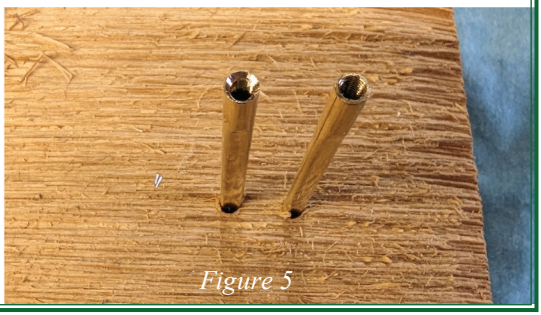
CHAMFERING THE MOUTH OF A THREADED LACING NEEDLE

Figure 3: Examples of fluted chamfering bits; the one at top has a hexagonal shank and can be mounted into a hand bit driver.

Figure 4: Chamfering a 2.5mm brass Fogliadoro needle, held as before in an aluminum mounting block and vise.

Figure 5: Chamfered (left) and unmodified (right) needles.





A New Knot?

by Bruce Sandbrook

I came up with this knot in about 2003 while doodling with rope. I've used it thousands of times since then, and found it versatile and extremely reliable. It is a jamming knot I have simply called the Sandbrook Bend.

Fairly simple to tie, this bend capsizes beautifully into its complete form. Once capsized, it is extremely strong, neat, compact, and performs very well even if not set properly. It is ideal for permanently joining two ropes, especially with materials that don't hold well, such as synthetic ropes or nylon fishing line.

I have seen many variations of cinching bends similar to this, such as Ashley's Bend (*ABOK* #1452) or the Zeppelin Bend, but none that capsize into their final form like this, and none that hold as securely. In fact, this is the most secure and reliable bend I know of. The tighter it is pulled, the tighter the four loops cinch onto each other.

Instructions on how to tie it "See Figure 1 p 18"

1) Bring the working ends of the two lines together in parallel (A). Make two interlocking loops by crossing the working ends, taking the lower working end back over the top of both standing ends (B), and the upper working end underneath both standing ends (C). You should now have two interlocked loops making a "b" and a "d" (upside down in B–D).

2) Take the lowermost working end, feed it down through both loops (E), and take the uppermost working end, and feed it up through both loops (F).

3) Hold both working ends with one hand, and both standing ends with the other, and set the knot (G).

4) Now, the final step is to deliberately capsize the knot by pulling the standing ends away from each other (H) until the working ends are cinched tight and point in the same direction (I).

5) The capsize sequence is shown in "See Figure 2 p 18". In this form, the harder the standing ends are pulled, the tighter the knot is cinched. And that is the Sandbrook Bend!

Figure 1

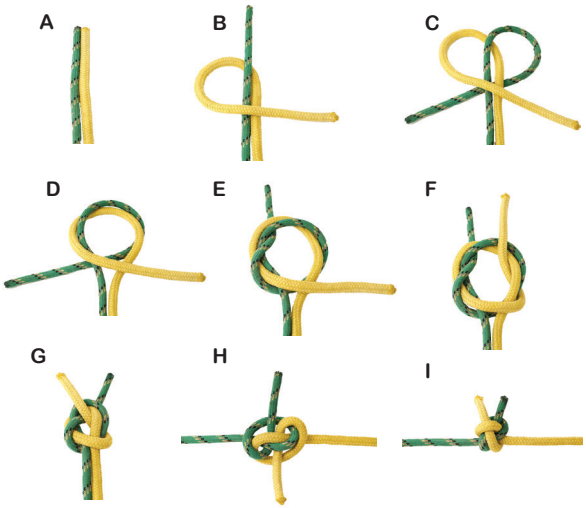


Figure 1: Tying the Sandbrook Bend. A, two lines brought together with working ends parallel. B, Loop created by lower working end being brought over both standing ends. C, Second loop created by bringing upper working end under the standing ends. D, interlocked loops, superimposed. E, lower working end fed down through both loops. F, upper working end fed up through both loops. G, knot set by pulling standing ends (in one hand) and working ends (in the other) apart. H, I, knot capsized by pulling standing ends away from each other.

Figure 2

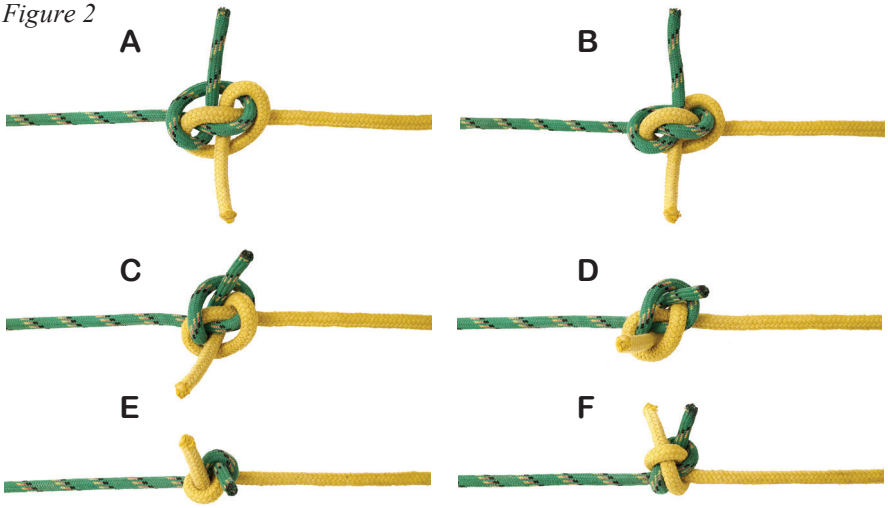


Figure 2: Capsizing the Sandbrook Bend. As the standing ends are pulled apart, the loops tighten (A–B) and the working ends are pulled toward each other (C–D), eventually pointing in the same direction (E–F).

Where Can I Get Custom Cord?

by Rich Cifelli

Central Oklahoma may well have a local knotting community, but I have yet to find it. So when I recently took up knotwork as an avocation, I naturally turned to books and (where else?) to YouTube. As luck would have it, I almost immediately stumbled on IGKT President Mikko Snellman's incredibly helpful tutorials (https://www.youtube.com/c/mikkosnellman). It was readily apparent that the limp, loosely twisted and readily tangled string—at that moment lying at my feet like a pile of overcooked spaghetti—I'd found at one of the local big box stores bore little resemblance to the stiff, wonderfully noisy cord that Mikko makes and uses in his videos. Through the following weeks and months, I came to find that the traditionalists among you favor twisted cord (or rope? I'm still hazy on terminology), usually but not always made of natural fibers like cotton, flax, and hemp, and of the tightly twisted, or "hard laid" kind. In the local Oklahoma vernacular, I had to git me some. Some of the Right Stuff.

"Not available in stores" is an understatement when it comes to the Right Stuff. Even the ever-more-comprehensive internet wasn't much help, probably because my vocabulary (hence pool of search terms) in the subject matter is limited, and I don't "do" social media. Eventually, though, I laid my hands on a supply of hard-laid cotton cord, in thicknesses ranging from 1.4 to 5mm. It's a joy to work with, but to my disappointment, the Right Stuff isn't an automatic shortcut to wizardry in knotcraft. Practice, practice, practice: Malcolm Gladwell (***Outliers***) prescribes 10,000 hours, a goal I will never reach…

I discovered that there is a small but dedicated community of artisanal ropemakers, and thinking that, among the broad, international readership of *Knotting Matters*, others might be interested in acquiring some handmade, hard-laid cord, I compiled a list of suppliers. I have corresponded with each of them; almost all will ship internationally. Cord generally comes in 10-m hanks (de Wit supplies 25m and 100m material), but most ropemakers can make longer. All work with cotton; many can supply cord in other fibers, such as flax, hemp, sisal, jute, and some synthetics (eg, polyester). Some offer a variety of colors and most make to custom diameters (sizes ranging from 1–4mm are most common) and hardness of lay.

The following list is more-or-less in alphabetic order by business name or

provider surname. I thank each of them for taking the time to correspond with me and I am especially grateful to Mark Delaforce and Sue Pennison for their help with names and addresses.

Australis Knots—Based in Margate, Tasmania, *KM* Editor Barbara Frankel provides hard-laid cotton cord, generally 3mm x 6m but custom sizes are available upon request, in a variety of colors. The website is https://www.australisknots.com.au/; email info@australisknots.com.au.

Blood Knot—Another ropemaker from Down Under (Geelong, Victoria, Australia), Mark Delaforce makes firm, hard, and custom laid cotton, jute, and some synthetic cord in various diameters and many colors. Orders can be placed directly on the website, https://bloodknot.bigcartel.com/; email for questions or custom sizes is bloodknotcord@gmail.com.

Edward de Wit—Based in Belgium, de Wit makes cotton, flax (linen), hemp, and pre-stretched spun polyester (a very strong substitute for cotton that is also UV resistant); he also offers Hempex and polypropylene rope, in diameters from 1–25mm or more. His standard length is 25m, but he can go up to 100m. Edward also makes rawhide lariats. Contact him via email: edward.dewit@telenet.be.

M Snellman Ropeworks—Based in Salo, Finland, IGKT President Mikko Snellman makes hard-laid cotton and flax (linen) cord (also hemp and jute to order) in 10m hanks and thicknesses of 1.5–4.5mm (custom diameters and length upon request). Linen is natural color only, but cotton is available in a variety of colors. The website is https://snellman.ax/cords-rope/; for information and custom orders, email is info@snellman.ax.

Rigging and Ropework—IGKT Trustee and ropemaker Sue Pennison (Hampshire, UK) can be contacted through her Instagram site, @rigging_and_ropework. She makes 1–4mm flax (linen) cord in natural color, cotton (same diameters) in many colors, and larger diameter hemp cord.

Jens Rimer—An able seaman based in Denmark, Jens makes cotton cord (various colors available) in 2, 3, 4, and 5mm, and hemp cable lays in 3 and 5mm; he can make thicker cord, in both fibers, upon request. His FB page is currently under construction; for now, interested parties can contact him via email: rimer1@live.dk.

Sexy Red Emporium—Cord and rope are made and sold through the Sexy Red Emporium, near Deming, New Mexico, USA. Online presence includes SanMc (Facebook), sexyredemporium (ecrater, Etsy), and sexyredusedbooksandmore (TikTok); for information or orders, email is tsssethbuster@hotmail.com.

Musings on a Lifetime
of Knotting and Braiding
by Hooey Michaels

What I have to share here is not a "tutorial", rather it is an incomplete journal covering my decades of knotting and braiding. Rather than try to cover all aspects of my past knotting and braiding experiences I thought it better to present you with some of the more interesting highlights that show scope and progression. Perhaps in the future I will fill in the gaps with details.

Knotting for me began sometime before 1970 with macrame. I worked with jute at first, then white cotton cord. I took to it easily and discovered I could be creative. A year after that beginning I had a copy of *The Ashley Book of Knots* in hand. So began my interest in the larger world of knotting beyond macrame. Through the 1970s and into the 1980s I continued macrame while learning what I could of nautical knotting.

In 1983 chance and good luck found me walking along the north-east coastline of Jamaica, West Indies. There I spotted a beautiful old tall ship docked at a marina and under repair after decades of neglect. She was a wooden-hulled, gaff-rigged schooner. Twin masts with topsails. 89ft on deck, and 115ft overall. I presented myself at the gangplank and was invited aboard. Within an hour I was hired on to do all the knotwork and sail repair. Here was my opportunity to apply all I had learned from *ABOK*. Being the only one of the crew familiar with knotting, and me not being afraid of heights, I had a free hand...and a lot to look forward to. I lived on board for 6 months, slept in my hammock, and enjoyed my time there immensely. My first chore was to rattle down the mainmast. It progressed from there. Eventually a time came when I left that ship in search of further adventures. I decided the sea was not my home.

I left Jamaica in 1984, and slowly made my way back to a small mountain village on the western slope of the Rocky Mountains in southwestern Colorado. Elevation was 9,218ft and surrounded by mountains that rose above 14,000ft. Low population, and nothing but forest in any direction for dozens of miles. I found work as a horse wrangler and horse packer. Knotwork came into play daily, though much different knotting than any I had worked with before. In the fall season I began packing horses and groups of people into the higher country. Hunters, photographers, or any other types of groups wanting a very different kind of experience. Packing in food, supplies, and gear, setting up

tent camps, and tending to the horses was the routine. I took to it naturally. Horseback in the high country, leading several inexperienced dudes, and a pack string loaded with dead weight can be demanding work. Knots and hitches have to be correctly tied and tensioned, or your loads will shift and throw the horses off balance. With narrow trails and sheer drop-offs of hundreds of feet or more, there is no room for error. Know your knots and hitches, know your horses... and be alert at all times. Winter comes early in the high country, and then I would head south to lower elevations for seasonal work to get me through the cold months.

Cattle ranches are usually a good place to find seasonal work...if you are up to that kind of work. I drifted with the seasons between high country and low. Knotting on ranches is important as well, and sometimes unique. It becomes interesting when you learn to knot and splice barbed wire. Rope can have "memory", but barbed wire has a mind of its own. Try working with it sometime and you will see what I mean. Sometime around 1990, I developed an interest in braiding. Leather braiding specifically. It was also around that time that I joined the IGKT.

I began leather braiding with a small spool of cheap pre-cut lace, a single brass needle threaded on one end, a pocketknife, and one of Bruce Grant's books on the subject. I found it difficult at first, but enjoyable and worth the effort. Again, with no one to teach me I began at ground level and worked at it. Within two years some of my braid work was selling. Selling just enough to buy more spool lace and a tool or two. Eventually I felt confident enough to buy a hide of leather to work with instead of the cheap spool stuff. Learning to cut my leather and prepare it was another learning experience in itself. I stayed

with it. I learned slowly, but I learned well. My braid work was improving tremendously. Over time I put together a nice collection of tools specifically for leather cutting and braiding. Some of these tools I designed myself. Since becoming a leather braider I have pretty much put other knot tying behind me. As of this writing, and not counting the 20 years I spent knotting, I have been braiding and improving my braid work for 30 years. I expect to keep braiding for years to come. Having followed my craft for a combined total of about 50 years now, I can honestly say knotting/braiding for me is more than a hobby, and beyond a craft...it is a way of life.

Last winter Idaho Public Television asked me if they could do a video/interview of me doing my braid work.

Take your knotting and braiding skills, keep going forward, and improve your skills. Enjoy the skills you have. One day I hope to write again to fill in some of the large gaps in this letter with details and encouragement.

All is well.....Hooey

Editors Note: Adding to Rich Cifelli's great list from p 19.

Knots & Tangles—Based in Grande Baie, Mauritius, owner Delphine Arlove has natural fibre craft supplies responsibly sourced from around the world; Cotton – Wool – Jute – Bamboo. https://knotsandtangles.mu/

A Knotted Fractal Mat

by Carol Wang

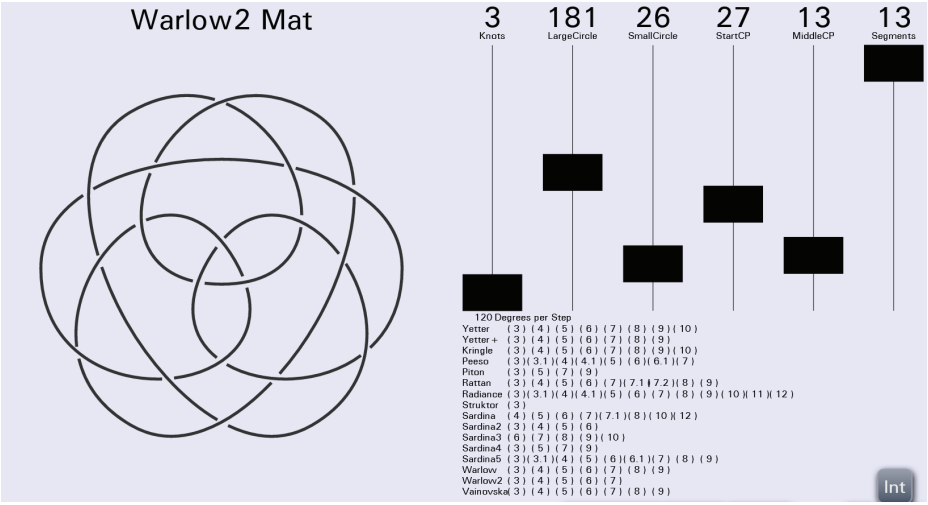
For the last 5 years, I have participated in an online event called Knot Games (https://www.instagram.com/knotgames.official/). It is a contest of sorts that takes place on Instagram run by a group of paracord vendors and enthusiasts. Each Games has a few rounds with a theme or prompt such as "monkey's fist", "black and white", or "Xmas". The base requirement, of course, is that paracord must be used. However, "paracord" is not restricted to the most common, 550 milspec paracord. "Official" paracord comes in weights from 95-1100 as well as "utility ropes" and smaller cords in the same colours and patterns.

My paracord collection is almost exclusively for using in Knot Games and I initially joined Instagram because of Knot Games. For my style of decorative knotting in general, paracord is far less suited than satin cord. Paracord's main saving grace is the spectacular array of colours and patterns they make. I have been collecting matching patterns in a variety of sizes with the general idea that at some point I might want to make a necklace in one size and earrings in a smaller size and perhaps a belt in bigger but all with the same pattern.

The theme of the first round of Knot Games 2023 was "Open Round" aka "do anything you want". My first thought was "If I could choose, I would not use paracord," which was missing the point, I admit. Reconsidering, "what do I like about paracord?" I remembered the colours, patterns, and sizes. What could I do with the different sizes? What popped into the mind's eye was an Escher style tiling. Ideally, one that didn't do more than double at each level.

In *Tessellations-Mathematics Art and Recreation* by Robert Fathauer (p 293; similar to www.robertfathauer.com/Square Knots.html but with a large ring in the centre as on the bottle) I found a fractal tiling that grew at a manageable rate.

Next, I needed to find a knot that I wanted to tie many, many times. It would be nice if it were a lower density knot that didn't need too much length, after all, that might be important for the outer edge. I decided to consult Scott Hall's Circle Mat calculator[1] (https://scott-y-hall.github.io/CircleMats/) for ideas.


Warlow2 Mat
3 Knots
181 LargeCircle
26 SmallCircle
27 StartCP
13 MiddleCP
13 Segments
120 Degrees per Step
Yetter (3) (4) (5) (6) (7) (8) (9) (10)
Yetter + (3) (4) (5) (6) (7) (8) (9)
Kringle (3) (4) (5) (6) (7) (8) (9) (10)
Peeso (3) (3.1) (4) (4.1) (5) (6) (6.1) (7)
Piton (3) (5) (7) (9)
Rattan (3) (4) (5) (6) (7) (7.1) (7.2) (8) (9)
Radiance (3) (3.1) (4) (4.1) (5) (6) (7) (8) (9) (10) (11) (12)
Struktor (3)
Sardina (4) (5) (6) (7) (7.1) (8) (10) (12)
Sardina2 (3) (4) (5) (6)
Sardina3 (6) (7) (8) (9) (10)
Sardina4 (3) (5) (7) (9)
Sardina5 (3) (3.1) (4) (5) (6) (6.1) (7) (8) (9)
Warlow (3) (4) (5) (6) (7) (8) (9)
Warlow2 (3) (4) (5) (6) (7)
Vainovska (3) (4) (5) (6) (7) (8) (9)
Int

Scott Hall rendering of WARLOW2 3

Here are some of the hexagonal edged knots that I auditioned. In the end, I decided on the 3 part Warlow2 3 (bottom right)

1 Note: If you use the segment slider in Scott Hall's Circular Mat calculator, it will effectively generate step by step instructions.

Figure 1

Figure 2

I tied all the knots in each round (Figures 1-3) and then heat sealed them closed before moving on to the next round.

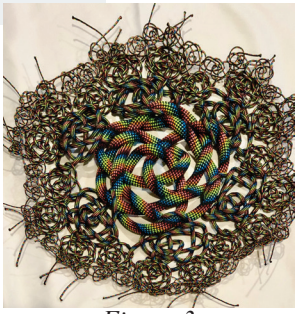
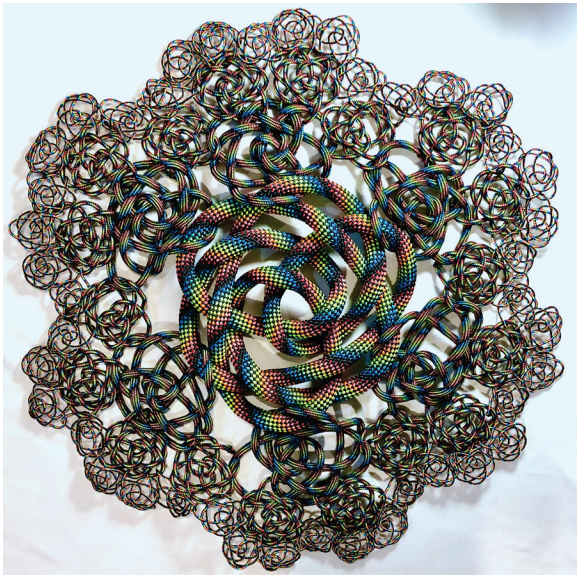
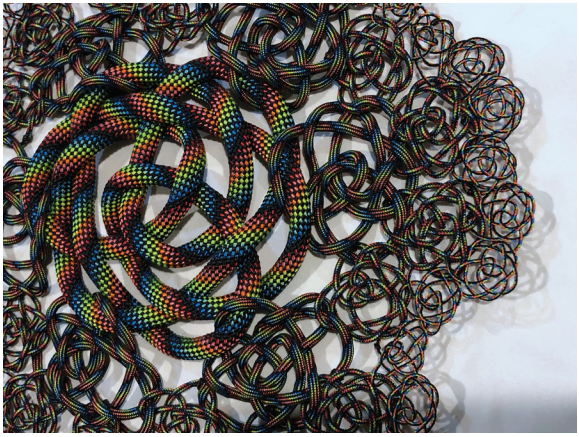


Figure 3





Ground Work

Finding Sources of Inspiration for Novel Rope Rug Patterns

by Rob Chisnall

I imagine many knot tiers with an interest in decorative projects have worked their way through Ashley's (1944) "Knob Knots. Two Strand Lanyard Knots" (Chapter 8), "Flat or Two-Dimensional Knots" (Chapter 30), and similar sources describing how to make rope rugs or mats. There have been some excellent articles in *Knotting Matters*, outlining a variety of mat patterns and techniques (Budworth, 1982, 2023; Byfleet, 2016a, 2016b, 2020; Burton, 1995; de Koning, 1988a, 1988b; Frankel, 2022; Mackenzie, 2020; Teenan, 2020). Other very informative references were mentioned in some of those articles (Rossing, 1996, 1997, 2012a, 2012b, 2012c; Åström & Åström, 2009, 2011, 2015, 2017). Most of these sources offer patterns that can be rendered in one circuit with a single strand of cord or rope.The purpose here is to offer additional sources of inspiration for mat making, along with a few procedural suggestions.

As described previously in *Knotting Matters*, many of the circular patterns are based on roulette functions such as epitrochoids, epicycloids, hypotrochoids, and hypocycloids. (Roulette is not to be confused with the casino game of chance. Definitions and relevant formulae are available in mathematics books on advanced functions and on Wikipedia.) Plotting programs like GeoBra and WinPlot can be utilized to render aesthetic mat patterns, as per Byfleet's instructions (2016a, 2016b, 2020), although some experimentation may be required. Regular rectangular patterns often follow Lizzajous or Bowditch functions, which also can be recreated by mathematical plotting or by using graph paper to extend repeating patterns.(***1***).Further, there are many great books and papers on the subject, and numerous on-line sites provide instructions for a variety of drawing and matting patterns.(For example: Dunham, 2004; and Pawson, 2016. Also, see the references at the end for sample URLs.)

Roulettes also can be created using the classic drawing toy, Spirograph® (Rosen, 2007).(***2***) "See Figure 1 p 28". Further, two or more roulette patterns can be overlaid and intertwined, with careful attention to alternating crossing points "See Figure 2 p 28". For anyone wishing to start making

1 *There are interesting links to Fourier decomposition and pendulum patterns (Rossing, 1886, 1997).*

2 *Spirograph was manufactured in various sizes and formats by the Denys Fisher Company (1962), Kenner, Inc. (1966), Hasbro (1998), and Kahootz Toys (2013).*

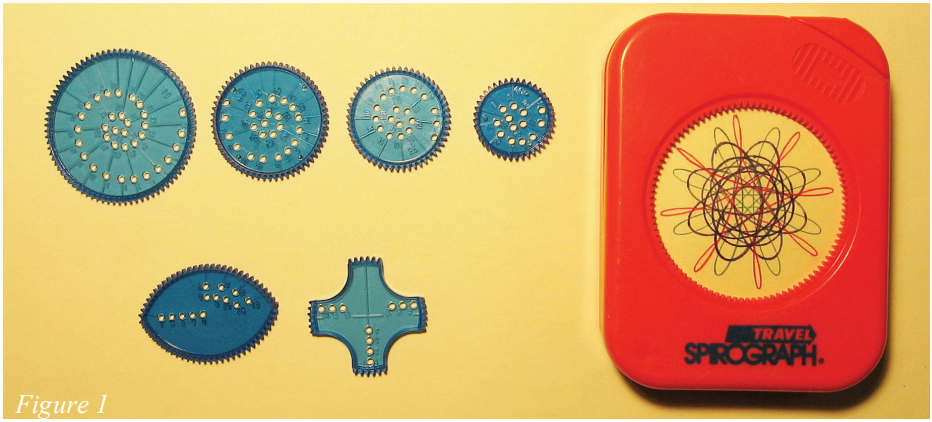


Figure 1

rope mats, simple Turk's Head patterns are roulettes that can be flattened out, like the Three-Lead by Five-Bight Turk's-Head (*ABOK* #1306, p 233; Coleman, 1997). Larger Turk's-Heads with more crossing points tend to have larger central holes. When fashioned from rope, they can serve as floor decorations around large potted plants.

Figure 2

My interest in making rope mats stems from decades of rock and ice climbing. Safety ropes age and eventually must be retired (***3***)**.** My wife and I retire our ropes every eight to 12 months owing to frequency of use. Giving them new purpose is better than discarding them to landfill. Our local climbing gym retires lines used for top-rope climbing regularly, so I have a steady supply of materials beyond our worn personal ropes.(***4***) Creating mats with colourful climbing ropes can be quite satisfying, and they make great gifts. Most of the several hundred mats I've produced have been given away at the climbing gym and elsewhere over the years, so I retain only a few photographs and rough pattern drawings.

Depending on whether climbing ropes are UIAA-rated as single, double or twin ropes, they can range in diameter from 8 to 11mm. Gym top ropes are typically 20 to 25m in length and indoor lead ropes are 35 to 40m in length. Outdoor

3 *The maximum lifetime of an infrequently used climbing rope is ten years, barring wear and damage, because they get thicker as they off-gas.*

ropes are usually sold in lengths of 60m and 70m, but 80m lengths are available as well. These lengths can be ideal for making circular mats of various designs with little waste, provided compatible mat designs are selected and the ropes are strategically cut as required. The number of leads and bights needed to complete a pattern determines how many times the ply or lay can be repeated and how many rugs one rope can produce.The stiffer the rope, the harder it is to work with and the gaps between crossing strands will be larger.(***5)***. Some ropes tend to kink quite a bit while being reeved through the various crossings of an evolving pattern. Very old and well-worn climbing ropes can be frayed, faded and sometimes quite pliable if they've been exposed to considerable rock abrasion. Braided yachting lines work just as well, although the colour patterns are more subdued. Ropes with contrasting colours can be combined in a variety of eye-catching ways.For classic circular designs involving one strand or circuit, I repeat the pattern three to five times, but most often four. With ropes of contrasting colours—say red (R) and blue (B)—the lay patterns can be alternating (RBRB), paired (RRBB) or bracketing (RBBR).

I enjoy the process of creating rough hand-drawn patterns first, a small sample of which are featured in this article. This initial step helps me understand structure and remember patterns. It also aids in identify starting points, where to conceal wends, and areas where reeving the wends and dressing the lay could be problematic. I've found several useful procedural tricks over the years. Some patterns I enlarge by transferring them to bulletin-board-sized paper or plastic liner sheets, which can measure roughly a metre square depending on the shape of the mat "See Figure 3 p 30". Of course, keeping pattern sheets in place while working requires some patience and strategically-placed duct tape. Peg boards are a better way to keep the rope in place while the initial pattern is being established "See Figure 4 p 30". Edelrid (2018), a climbing gear manufacturer, has an on-line printable pegboard pattern for climbing ropes.

---

4 Retired ropes can find new life in many ways. According to a display in the Canadian Museum of Nature in Ottawa, Canada, of the top ten sources of refuse found in the oceans—Canadian waters at least—discarded ropes fall into the number ten category. They likely originated from old nets and marine lines. In his B.Sc. thesis, Geofrey Budworth investigated ghost nets and non-biodegradable cordage drifting in oceanic gyres or deposited on shorelines which catch and kill wildlife. No doubt deteriorating synthetic lines contribute to the ongoing accumulation of micro-plastics in our environment as well See Napper (2022) and Raifeartaigh (2021).

5 How easily and tightly a pattern can be rendered is governed by a rope's thickness as well as its knotability and working capacity over an edge, which are measures of flexibility (EN 897; Microys, 1977).

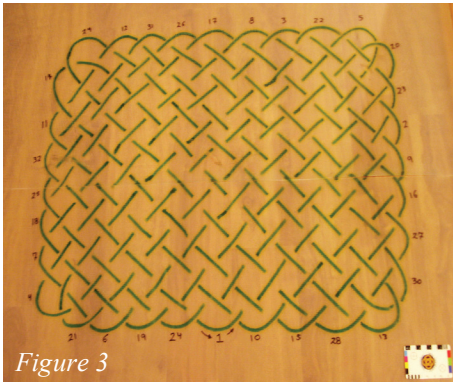


Figure 3

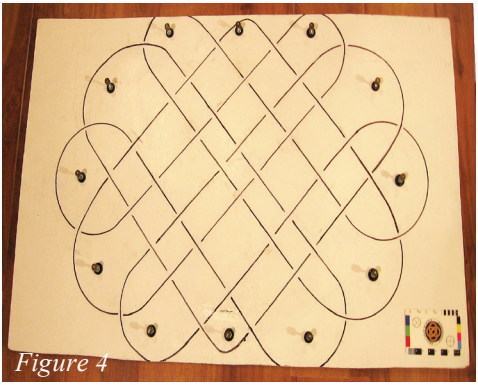


Figure 4

I have constructed several peg boards, and the circular one illustrated has several templates that can be inlayed for different patterns. Without a custom-made peg board for the larger rectangular rugs, my wife and I have to work together to keep everything in place and to check crossings. Having to undo crossings is time consuming and annoying.

I've found that needlenose or long-billed pliers can serve as a makeshift but effective fid. I can also use pliers to grip and pull rope strands as the rug gets snug. (Using pliers saves the hands. My thumbs and wrists get achy if I don't use pliers because I'm not 70 anymore!). I use an electric soldering iron with a spatula blade to cut and melt ends. Melting rope ends produces hydrogen cyanide, so good ventilation is essential. Taping and gluing cut ends is another option. I've employed various types of adhesive to finish off and secure the ends on the undersides of mats: Krazy Glue, Gorilla Glue and marine epoxy are some of the many useful products available. Another strategy is to sew loose ends to each other or to adjacent strands, depending on the pattern and lay achieved. Heavier nylon thread, larger straight or curved needles, regular pliers, and a sailor's palm are useful at this stage as well (Figure 6).

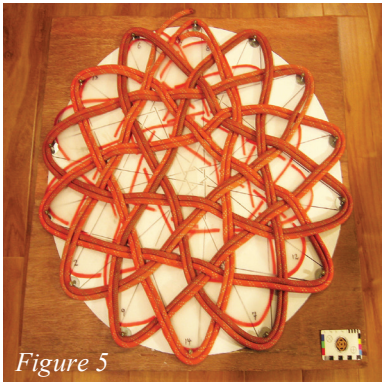


Figure 5

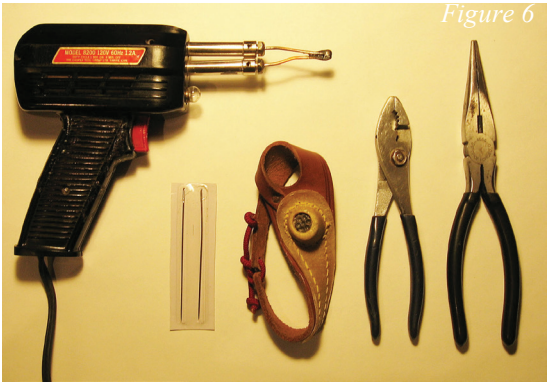


Figure 6

Ideas can come from many unexpected sources. For example, Figures 7 and 8 show two designs of different sizes based on the Alhambra mosaic (Moscovich, 2015, p 105). This was a challenging pattern, not only because there were multiple intertwining strands or circuits rather than just one continuous strand, but the sharp bends necessitated a lot of adjusting and successive passes tended to bunch up. Also, I found that stiff ropes did not work well with this design. Once a work colleague wanted a rug made based on his arm tattoo. Figure 9 shows the original design along with a modified version. As can be seen, the original pattern would have lacked structural integrity around the outside. Therefore, I added crossings to the outer rim to hold everything in place. "See Figure 10 p 32" show two rugs based on a standard circular pattern that's been enhanced. I added extra loops and crossings to the outer rim, lending the mat a stellated aspect. Smaller and simpler rosenmatta (***6)*** designs for shorter lengths of rope are illustrated in "See Figure 12 p 32". More complex rosenmatta designs featuring up to two and maybe three layers are possible with climbing ropes.

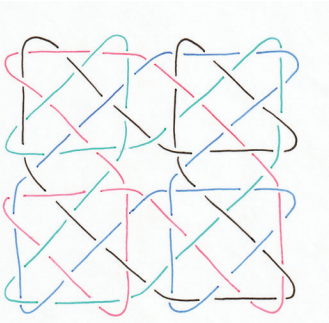


Figure 7

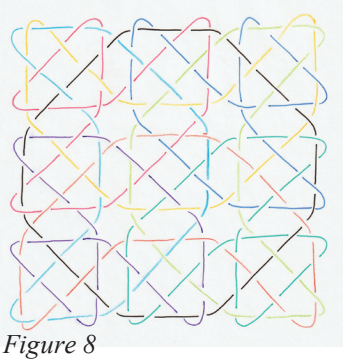


Figure 8

My inspiration for new patterns, aside from the ones mentioned, also arises from old-fashioned experimentation with graph paper and pencil. Some patterns can be completed in one circuit with a single length or rope. Others require the entanglement of multiple strands or circuits, like the Alhambra mosaic designs, as indicated by different colours in the accompanying figures. I've experimented with various repeating patterns and regular polygons. "See Figure 13 p 32" illustrate triangular patterns of different

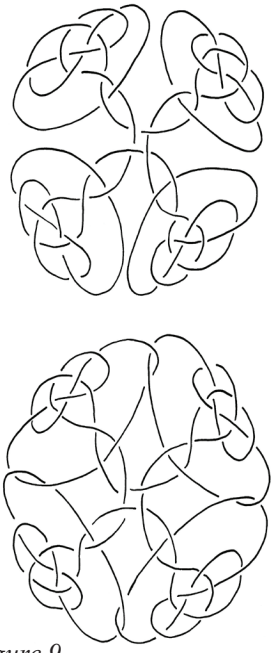


Figure 9

6 Rosenmatta or rose mats are based on Pattern 295 (Byfleet, 2016a, Åström & Åström, 2015).

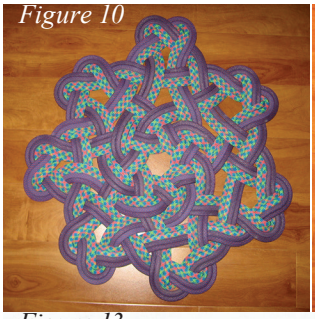


Figure 10

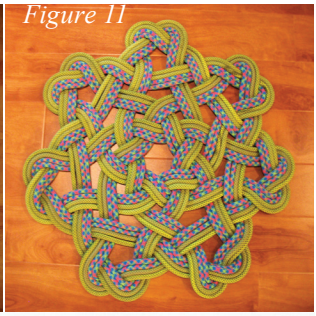


Figure 11

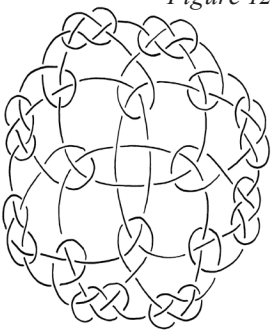


Figure 12

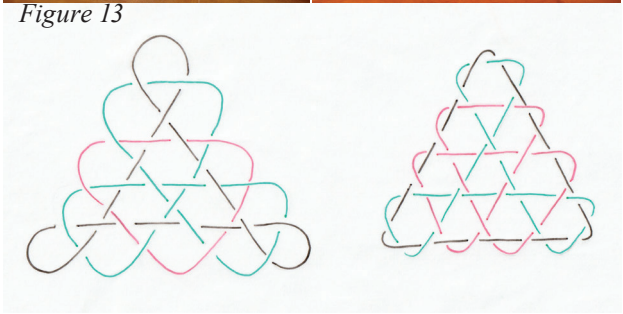
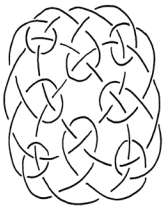


Figure 13



sizes, and “See Figure 15 p 32” show some of the finished products. These smaller projects offer a way to use up short rope remnants in creative ways. Two patterns for hexagonal mats of different sizes are illustrated in “See Figure 17 p 33”. I found that hexagonal patterns required a lot of adjusting and they tend to appear more circular than hexagonal when finished. “See Figure 18 p 33” illustrates variations on cross designs. It’s likely none of these patterns is new, but it was gratifying to design rugs from scratch.

There are many other sources of inspiration—too many to illustrate here. For example, a mathematics project from the University of Edinburgh by authors Connor and Ward (2012) examines Celtic knot theory. Using matrices and other algebraic techniques, Celtic knots are compared to alternating

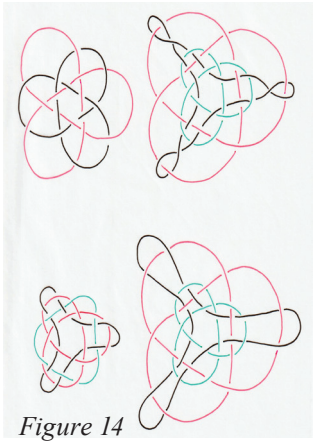


Figure 14

Figure 15

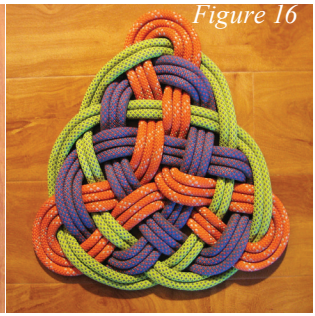


Figure 16

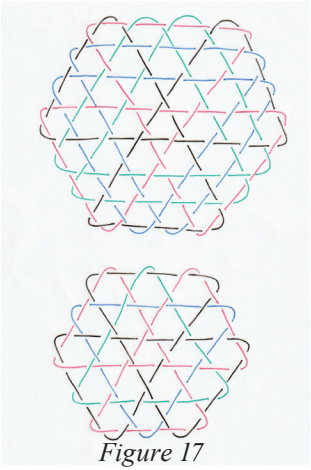


Figure 17

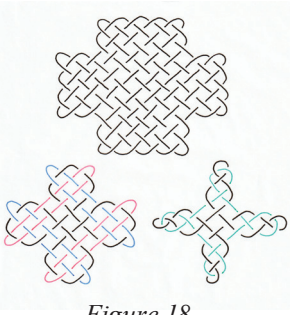


Figure 18

Figure 19

knots, and some interesting avenues for invention are suggested. Additionally, there are a multitude of Celtic pattern images available on line and in print that can be replicated or expanded to make some unique rope mats. Other mathematical sources include monographs on braiding from the University of Waikato (Schaake, et al, 1988a, 1988b) and *Knotting Matters* (Turner & Schaake, 1991). Alternating and irregular rectilinear patterns can be designed using the algorithms featured in those references. Truncated braids of various widths and lengths can be created, with potential for making attractive hall rugs—although, large-diameter ropes can present a tripping hazard. These are just two examples of mathematical resources. There are many others, including books covering tiling patterns, super-tiling, regular and semi-regular tessellations, pinwheel triangles, Möbius strip entanglements, and Pascal's triangle (Gardner, 1975; Moscovich, 2015; Peterson, 1988; Pickover, 2006). These topics offer potential for a variety of rug designs.

I find making rope rugs quite relaxing, and I usually listen to music or an audio book while I'm working. A small sample of traditional rope rug projects can be seen in Figures 19 through 22. I have many more drawings and evolving ideas on file, and I encourage Guild members to experiment and try new designs.

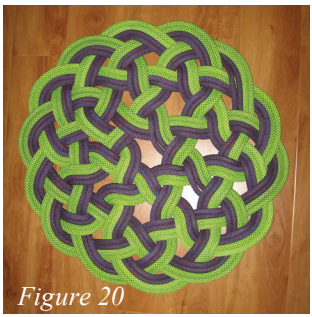


Figure 20

Figure 21

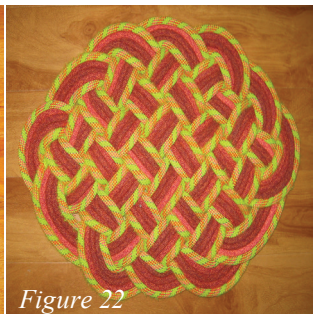


Figure 22

References

Ashley, C.W. (1944). *ABOK,* Doubleday & Company, Inc., Garden.. City, New York.

Åström, A. & Åström, C. (2009). Octagonal knotworks—A mathematical approach. *Visual Mathematics 11* (3): pp 1–21.

Åström, A., & Åström, C. (2011). Circular knotworks consisting of pattern no.295: A mathematical approach. *Journal of Mathematics and the Arts 5* (4): pp 185–197. https://doi.org/10.1080/17513472.2011.631460

Åström, A., & Åström C. (2015).Circular knotworks II: combining pattern no. 295 with Turk's heads. *Journal of Mathematics and the Arts 9* (3-4): pp 91–102. https://doi.org/10.1080/17513472.2015.1082899

Åström, A., & Åström C. (2017). *A Practical Approach to Circular Knotworks*. International Guild of Knot Tyers.

Budworth, G. (1982). Letter from Sir Frederick Harmer of Saxmundham, Suolk. Concerning circular mats. *Knotting Matters 1*, p 11.

Budworth, G. (2023). A rectangular mat. *Knotting Matters 158,* pp 26–27.

Burton, A. (1995). Report of Half A.G.M., October 7/8 at Leeds, Yorkshire. *Knotting Matters 51*, 19. Figure 14, Appledore-style round mat by Des Pawson.

Byfleet, C. (2016a). Circular mats. *Knotting Matters 131*, pp 33–36

Byfleet, C. (2016b). Circular mats 2. *Knotting Matters 132*, pp 12–15.

Byfleet, C. (2020). Covid-19 pastimes: Part 2. *Knotting Matters 149*, pp 41–44.

Coleman, J. (1997). Turks head knots and the rule of the greatest common factor. *Knotting Matters 57*, pp 22-25.

Connor, J., Ward, N., Ranicki, A., & Collins, J. (2012). Celtic knot theory. Project in Mathematics (Group). The University of Edinburgh.

de Koning, M. (1988a). Mats. *Knotting Matters 22*, p 6.

de Koning, M. "King" (1988b). More mats. *Knotting Matters 23*, p 2.

Dunham, D. (2004). Hyperbolic Celtic knot patterns. *Bridges: Mathematical Connections in Art, Music and Science, Conference Proceedings*, pp 13–22.

Edelrid, 2018, Instructions: creative rope mat. https://edelrid.com/int-en//vertical-freedom/edelrid-news/tops-ideas-knowledge/creative-rope-mat

(EN) The European Standard EN 892: 1996 (British Standard BS EN 892: 1997), Mountaineering equipment—Dynamic mountaineering ropes—Safety requirements and test methods.

Frankel, B. (2022). Instructions for tying *ABOK* 2275: 9 lead, 20 bight, 4 pass Turks Head Mat. (*Knotting Matters* insert). info@australisknots.com.au

Gardner, M. (1975). *Mathematical Carnival.* Vintage Books, Random House, New York.

Mackenzie, M. (2020). My first experience of making a mat. *Knotting Matters 147*, pp 19–21.

Microys, H.F. (1977). Climbing ropes. *American Alpine Journal 21*, pp 130–147.

Moscovich, I. (2015). *The puzzle universe: A history of mathematics in 315 puzzles.* Firefly books, Richmond Hill, Ontario, Canada.

Paul, W. (1983). Determining Rope Safety. *Response! Spring 1983,* pp 9–13.

Pawson, D. (2016). *Knot craft and rope mats: 60 ropework projects including 20 mat designs.* Adlar Coles, Bloomsbury Publishing.

Peterson, I. (1988). *The Mathematical tourist: Snapshots of modern mathematics*. W.H. Freeman and Company, New York.

Petzl® "Change in the Length of My Rope" http://www.petz.com/US/en/Sport/Change-in-the-length-of-my-rope-after-use?

Pickover, C.A. (2006). The Möbius Strip: Dr. August Möbius's marvelous band in mathematics, games, literature, art, technology, and cosmology. Avalon Publishing Group, Inc., New York. Möbius strip and knot by Rob Scharein, p 164, figures 7.37 and 7.36.

Napper, I.E., Wright, L.S., Barrett, A.C., Parker-Jurd, F.N.F., & Thompson, R.C. (2022). Potential microplastic release from the maritime industry: Abrasion of rope. *Science of the Total Environment 2022*; 804:150155.

Raifeartaigh, P.O. (2021). Bio-based and biodegradable nets could be the solution to 'ghost nets' jeopardizing sea life. CORDIS. https://phys.org/news/2021-05-bio-based-biodegradable-nets-solution-ghost.html

Rosen, R. (2007). *Math geek*. (Chapter 97, Using a Kid's Toy to Make Epitrochoid Curves, pp 281-2). Adams Media, Avon, Massachusetts.

Rossing, N.K. (1996). The old art of rope work and modern signal processing. *Knotting Matters 54*, pp 19–27.

Rossing, N.K. (1997). Cylindrical chains. K*notting Matters 57*, pp 26–33.

Rossing, N.K. (2012a). The old art of rope work and Fourier decomposition. *Bridges 2012: Mathematics, Music, Art, Architecture, Culture*, pp 315–322.

Rossing, N.K. (2012b). Mathematical synthesis and making of rope mats and rosettes. *Bridges 2012: Mathematics, Music, Art, Architecture, Culture*, pp 573–574.

Rossing, N. K. (2012c). How to make rope mats and rosettes. Resource Centre for Mathematics, Science and Technology Education at NTNU and The Science Center in Trondheim, Norwegian University of Science and Technology. https://www.frayedknotarts.com/files/Knotbooks/RopeMatsAndRosettes/RopeMatsAndRosettes.pdf

Schaake, A.G., & Turner, J.C. (1988a). A new theory of braiding, Research Report 1/1 No. 165, Privately Published, Hamilton, New Zealand.

Schaake, A.G., Turner, J.C., & Sedgwick, D.A. (1988b). Braiding—Regular knots, a series of books on braiding. Book 1/1, Department of Mathematics and Statistics, University of Waikato, Hamilton, New Zealand, 1988.

Teenan, G. (2020). How much in a mat? *Knotting Matters 149*, pp 18–19.

Turner, J.C., & Schaake, A.G. (1991). A proof of the law of the common divisor in braids. *Knotting Matters 35*, pp 6–10.

Plotting Applications

GeoBebra. https://www.geogebra.org/http://www.geogebra.org). (Accessed Jan 2024)

WinPlot—Plotting utility software. https://cs.hofstra.edu/winplot/.(Accessed Jan 2024)

KnotPlot—https://knotplot.com/.(Accessed Jan 2024)

A Sample of On-Line Instructions

How to make a kringle mat with rope and paracord, YouTube video.https://www.youtube.com/watch?v=2y1DBSlxzVI. (Accessed Jan 2024)

38 rope door mat ideas & patterns (2015). Pinterest. https://www.pinterest.com/fancnanc67/rope-door-mat-ideas-patterns.(Accessed Jan 2024)

How to make a beautiful rope door mat. https://www.bing.com/search?q=How+to+make+beautiful+rope+door+mat&form=ANSPH1&refig=8A56D9BC57954A9CA122B013EAD97BCB&pc=U531 (Accessed Jan 2024)

Mat Knots. https://www.animatedknots.com/mat-knots.(Accessed Jan 2024)

News from the Branches

Hello Fellow Knotters,

There is always interest in how IGKT can expand the membership as well as keeping current members happy. As our wonderful *Knotting Matters* magazine plays a role as part of the membership package, it would be most useful to know three key things:

What do you enjoy about *Knotting Matters?*

What would you like to see more or less of?

What new things would you like to see?

Rather than add more work to the hard-working editorial team, please reply to me as soon as you can at: lynne.m.hudson@btinternet.com

I will collate the responses and share this information for publication in a future edition of *Knotting Matters*. The editorial team and I, will use your input to improve how the magazine may better serve our knotting community.

I look forward to your replies (please don't hold back!!).

Lynne Hudson— Member, IGKT Council of Trustees & Executive Committee

YORKSHIRE BRANCH MEETING DATES

Sunday, 17 March, 2024—Topic: *"Solomons"*

Sunday, 17 November, 2024—Topic: *to be arranged*

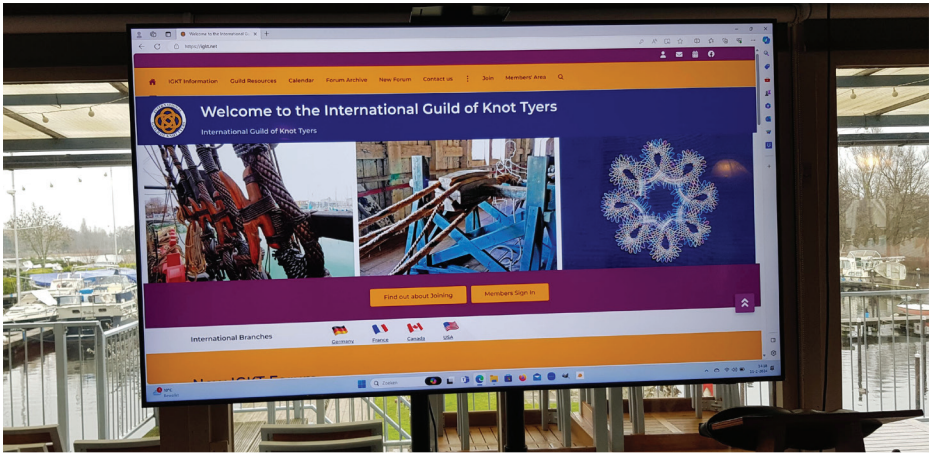
Netherlands Branch News

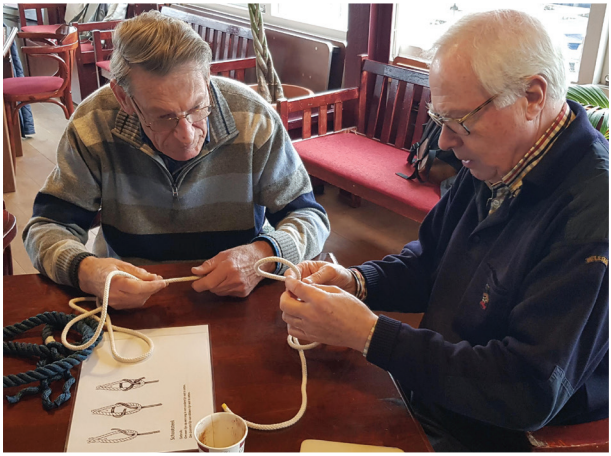
This February three members of the Dutch Branch of the IGKT, André van der Salm, Jan Roelofs and Marjolein Vrijman, together with knotting enthusiast Martin van der Leer, organised a knot tying workshop at the Marina of the "Watersport Vereniging Aalsmeer" in the Netherlands. The committee of this Watersports Club, just south of Amsterdam, had asked the IGKT to provide a workshop for her members. On a Sunday afternoon about 15 people came to the Marina to get instructions in knot tying techniques of all kind. Some wanted to learn basic knots to use aboard their ship, like the Sheetbend, Bowline, Clove hitch, Rolling hitch etc. Others wanted instruction on how to make an Eyesplice in 3 strand rope. And there were 7 daredevils who, helped by Martin, tried their luck on an Eyesplice in double braid rope. For the owners of a sailing vessel there was also the opportunity to make a Dyneema soft-shackle, which is a strong lightweight alternative to a metal shackle and very popular amongst sailors to be used on the jib.

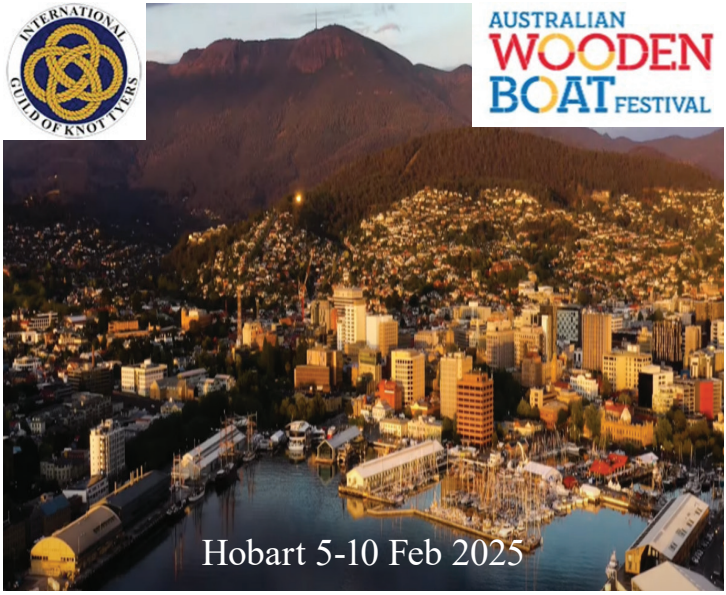
Dyneema soft-shackle

The workshop was kicked off by Marjolein who gave a brief introduction about the Guild, the Dutch Branch and the knotwork we make. There was also a large table with a number of books, rope–knottying tools, short lengths of rope to practise with, as well as some examples of different kinds of knot–ropework, made by us, on display.

All in all it was a pleasant and informative afternoon which will certainly get a follow-up next winter, because, at the end of the afternoon there was not enough time left to discuss and try the somewhat more elaborate projects like the Thump Mat, the Ocean Mat, Turks Heads and other decorative knots.


IGKT Information
Guild Resources
Calendar
Forum Archive
New Forum
Contact us
Join
Members' Area
Welcome to the International Guild of Knot Tyers
International Guild of Knot Tyers
Find out about Joining
Members Sign In
International Branches
Germany
France
Canada
USA





IGKT Australian Meeting

Venue - Hobart Town Hall

5-6 Feb - Closed IGKT Meeting & Dinner

7-10 Feb - Public Exhibitions, Demonstrations, Tutorials as part of the the Australian Wooden Boat Festival

Knotty Volunteers Needed!

Fender making tutorials

Children's knot tying activities

Knot Tying Demonstrations & Competitions

Please contact Barbara.Frankel66@gmail.com

if you are interested in helping with festival activities

https://australianwoodenboatfestival.com.au/
https://www.hobarttravelcentre.com.au

PHOTO CREDITS AUSTRALIAN WOODEN BOAT FESTIVAL

France Branch — Les noeuds : thérapie douce? Cherchant des exercices de concentration pas trop difficiles, je suis tombé par hasard sur les noeuds. J'ai constaté que les exercices autour des noeuds fonctionnaient bien pour obtenir une concentration et une certaine logique.

En revanche, quand on propose cet exercice, il faut savoir ce qu'on cherche.

Les noeuds sont un exercice logique pré-mathématique. On n'a pas besoin de la géométrie du collège pour les comprendre et les utiliser.

Les noeuds ne sont pas un exercice langagier. On n'a pas besoin de mots pour les appréhender.

Les noeuds exigent une notion d'avant-arrière, de séquentialité. La distinction dormant/courant est parfois absente, surtout quand les gens ne savent pas lire.

Les noeuds ne se mélangent pas. Le noeud de chaise ne communique pas avec le noeud de cabestan. Donc si une personne étudie 4 noeuds, elle est obligée de se concentrer 4 fois.

Les noeuds donnent accès à certains raisonnements physiques, de gestion de la matière et de ses contraintes. Ils sont vraiment adaptés aux travailleurs manuels, qui raisonnent naturellement comme ça. Quand un maçon connaît bien ses noeuds, il explique bien aux autres et il comprend bien ce qu'on lui demande.

Après les noeuds, il y a une étape géométrique, qui est celle de la charpente en bâtiment. Ce n'est pas la géométrie plane du collège. Mais c'est déjà plus mathématique.

Par expérience une bonne séance de noeuds, en groupe, prend une heure. Avec des bout's de 2m de long et 8mm de diamètre, de couleurs différentes.

Qui est Nicolas Roussel ? je suis formateur de Français Langue Étrangère. J'interviens auprès de publics étrangers et souvent réfugiés. Certains n'ont jamais été scolarisés. Ce sont tous des adultes, hommes ou femmes.

— Nicolas Roussel

Les noeuds : thérapie douce? (Suite) Il y a plusieurs façons d'aborder les formations aux nouages, parmi lesquelles je dégagerai deux grands groupes :

Utilitaire

Apprentissage des noeuds à des adultes dont le but est leur utilisation réelle (pêcheurs, navigants, passionnés…), c'est dans ce groupe que nous officions le plus souvent.

Développement personnel

Apprentissage des noeuds à des adultes pour qui l'utilisation leur est, à priori, d'aucune utilité directe. Ceci s'adresse plutôt à un public de 15/30 ans, public mentionné par Nicolas, auquel j'ajoute les jeunes en insertion.

Cet 'apprentissage' étant plus un prétexte pour développer leur concentration, qu'ils reprennent confiance en eux-mêmes, leur transmettre le goût du travail bien fait, la persévérance, l'observation, l'ouverture d'esprit, le respect des normes, la patience, la dextérité…

Dans cette approche, le but n'est pas de leur apprendre des quantités de noeuds différents mais plutôt de montrer le cheminement menant d'un schéma jusqu'à la réalisation d'un noeud, introduction des notions dessus/dessous, dormant/courant, de découvrir les évolutions, par exemple, comment et pourquoi passer du noeud simple au noeud de capucin, permettant de développer l'observation et de prendre du recul pour améliorer un processus.

Montrer que tout est évolutif et perfectible.

Leur faire découvrir une méthode de travail pour qu'ils puissent se passer du formateur et se prendre en charge pour atteindre un objectif et savoir travailler en groupe avec des échanges réciproques.

Leur prouver qu'ils peuvent résoudre des problèmes complexes avec une méthode simple : décomposer un ensemble complexe en éléments simples, c'est la séquentialisation de processus, transposable à plein d'autres situations de la vie.

J'assure des formations à une douzaine de jeunes en insertion.

Quelques réactions

▪ 'Les noeuds c'est super, il faut beaucoup de concentration et pendant ce temps-là, on ne pense à rien d'autre'. (M. 21 ans).

▪ 'Nous apprécions beaucoup ces formations aux noeuds, ça nous sort du train-train quotidien, on découvre d'autres horizons'. (N. 24 ans).

▪ La responsable me disait que pour beaucoup, les nouages leur servaient d'anti-stress et de dérivatif, leur permettant d'oublier momentanément leurs difficultés dans la vie.

Et puis, quel plaisir de voir le regard de chacun après la réalisation de leur première pomme de touline !

Quelques-uns continuent de nouer après ces stages.

2024 IGKT AGM

National Museum of the Royal Navy, Hartlepool
Hartlepool Northeast UK Coast
Thursday to Sunday, May 9th - 12th

Details at:
https://bit.ly/49rspXo

The AGM at Hartlepool will include a lanyard competition open to all attendees! Bring your lanyard(s) for a chance at the as-yet-undisclosed PRIZE(S) or AWARD(S). We look forward to seeing you there!

Following consultation with the Museum, they are prepared to allow attendees who are pre registered to attend the AGM, free admission to the Museum on the Thursday. They will have a list of names.

We are planning a dessert to follow the Saturday evening Hog Roast meal, at an extra cost. Details to be confirmed.

The Marina does not run regular boat trips but could arrange the following:

On Water Training are able to pre-arrange Boat Trips for min of 8 people. We do not offer regular boat trips, but can arrange something in advance (1 month ideally) if people are interested. This would be for a minimum of 8 people at a cost of £35pp, taking part in a 2 hour experience including kitting up. We would take the customers around the marina in our RIB (rigid inflatable boat) then out the lock gates and to sea, the RIB is 250HP and gives a great ride as well as unique vantage point to the Tees Bay coastline. The more notice we can have the better, as I will need to allocate a skipper and check the tides.

Another activity that could be arranged in advance would be Stand Up Paddleboarding, which is also £35pp including wetsuit and buoyancy hire as well as board, paddle and leash. Both these activities would need to be lined up with Instructors in advance and are weather dependant.

There will be a small shop run by one of our members, Bruce Turley, selling cord and other knotting related supplies.

Please register your attendance early, plus offer of talks or demonstrations. Thank you Sheila Pearson — sheilapearson@yahoo.co.uk

Obituaries

On behalf of the Dutch Branch, we are saddened to inform you that our knot tying friend and former member of the IGKT, Dick Hollander, passed away on 29 December 2023 at the age of 81.

Dick was a gifted knot tyer with a specialisation in fenders and crowned bellropes (See Back Cover). He always took great pleasure and passion in tying and telling about his work and also took the time to teach others.

Unfortunately, health reasons had prevented Dick from attending the meetings of the Dutch Branch for several years, something that was certainly very difficult for him.

A great and skilled knot tyer has passed and will be missed but not forgotten. May you rest in peace.

Chapter Contacts

Australia

Contact: Robert Underhill
rvumoose@icloud.com
Tel: +61 488 777 785
34 Dawson Place, Donnybrook,
WA 6239 Australia

Belgium

Contact: Ronny Wouters
rcwouters@scarlet.be
Tel: +32(0)3 658 7937
Venue: Akkerlaan 24, 2900 Schoten,
België

Canada

Southern Ontario Knot Tyers
http://knotcanada.webs.com
Contact: John Staley
southern.ontario.knotyers@gmail.com
Tel: +1 905 389 2509
Venue: Hamilton, Ontario

France

www.igkt.fr
Contact: Jean-Pierre Durand
durand0547@orange.fr
Tel: +33(0)6 64 00 66 91

Germany

http://www.knotengilde.de/
Contact: Yuval Dvoran
info@knotengilde.de

Internationale Gilde der
Knotenmacher Deutsche Sektion e.V.
c/o Matthias Böving
Kappenstrasse 22
45473 Mülheim/Ruhr

Netherlands

Contact: André van der Salm
andrevdsalm@gmail.com
Tel: +31 (0) 625 067 174
Venue: Binnenvaart Museum,
Maasstraat 19, 3313 CR Dordrecht.

New Zealand

All enquries about this branch: contact the Guild's Web Administrator.

United Kingdom

Dorset - UK

Contact: Peter Goldstone
goldstonepg@aol.com
Tel: +44 (0)1725 516 258 or
Mobile: +44 (0)7702 733005
Venue: The Ship Inn, Custom House
Quay, Weymouth DT4 8BE

East Anglian - UK

Contact: Stuart Weston
pugwash1941@gmail.com
Tel: +44 (0)1449 674 327 or
+44 (0)7801 239 731
Venue: Windmill Room, Abbots Hall
Primary School, Danescourt Ave,
Stowmarket, Suffolk

Midlands - UK

Contact: Bruce Turley
bruce@btknots.co.uk
Tel: +44 (0)1214 534 124
Venue: The Old Swan Inn,
(Ma Pardoes), 89 Halesowen Road,
Netherton, Dudley, DY2 9PY

North West England - UK
Contact: Ian Rogers
iansrogers@aol.com
Tel: +44 (0)1606 590 729
Venue: Red Lion, 1 Wharton Rd, Winsford, Chester CW7 3AA and Tattenhall Marina, Newton Lane, Tattenhall, Chester CH3 9NE

Solent - UK
http://igkt-solent.co.uk
Contact: Chris Jenkins
igktchris@btinternet.com
Tel: +44 (0)2392 601 779
Venue: Fareham Sailing and Motor Boat Club, Lower Quay, Fareham, Hampshire PO16 0RA

Surrey - UK
www.surreyknots.org.uk
All enquries about this branch: contact secretary@igkt.net

West Country Knotters - UK

Contact: Richard Hopkins
richardhopkins907@gmail.com
Tel: +44 (0)1179 867 146
Venue: Woodhouse Park Fernhill, Almondsbury, BS32 4LX

Yorkshire - UK
Contact: David Pearson
wayzegoose_uk@yahoo.co.uk
Tel: +44 (0)113 257 2689
Venue: Pudsey Scout Headquarters, The Lanes, Pudsey, LS28 7AS

United States of America

Alaskan Branch - USA
Contact: Charles Rigden
charles@rigdencpa.com
Tel: +(1) 928 231 2775
Venue: Anchorage Senior Center, 1300 East 19th Avenue, AK 99501

North American Branch - Knot in the Middle - USA
www.igktnab.org
Contact: John Staley
southern.ontario.knotyers@gmail.com
Tel: +(1) 905 389 2509

North American Branch - Mid-Atlantic Region - USA
All enquries about this branch: contact the Guild's Web Administrator.

Pacific Americas - USA
www.igktpab.org/
Contact: Peter Glick
PMGlick@gmail.com
Tel: +(1) 310 871 8611
Venue: Via Zoom, Contact Peter for details

All chapter details as on IGKT website on 26/02/2024

IGKT SALES	GBP
A Booklet of Lanyards, Willeke van der Ham — an easy to follow introduction to making lanyards	£4.00
Advanced Knotting, Maurice McPartlan — An excellent DVD for complex 3D Turks Heads	£12.00
A Fresh Approach to Knotting and Ropework, Charles Warner — A wonderful work with over 500 diagrams	£15.00
A New System of Knotting, Harry Asher — A reprint. Asher's genius is shown really clearly	£7.00
A Practical Approach to Circular Knotworks, A and C Åström — Circular knots **2nd Edition**	£10.00
Breast Plate Designs, Brian Field — Designs to make and wear	£3.00
Charlie's Knots, Charlie Smith — Tying Turks Heads directly in the hand New edition	£3.00
Concerning Crosses and More, Brian Field — Flat Knots tied 'in hand'	£3.00
Decorative Woven Flat Knots (incl pdf), Skip Pennock — Lots of terrific shapes	£12.50
Design and Make Rope Mats and Rosettes, Nils Kristian Rossing — Circular mats **2nd Edition**	£13.00
Exploring Turks Heads Articles about Turks Heads from the first 150 issues of *Knotting Matters*	£14.00
Knotcraft, Stuart Grainger — A much—loved book about decorative knotting	£4.00
Knotted Fabrics, Stuart Grainger — Making mats, covers, baskets, etc. A reprint of this popular work	£10.00
Knotted Novelties, Eric Franklin — Reprint of *Nylon Novelties*	£3.00
Knotty Potty, 'Jenny Wren', alias IGKT co—founder Geoffrey Budworth	£4.00
Monographs 1-14, Des Pawson — Various prices, see full list on website	
Plaited Moebius Bands, Geoffrey Budworth — A collection of knots with the properties of Moebius strips	£2.00
The Fender Book, Colin Jones — Does exactly what it says	£12.95
The Rope Menagerie and A Ropy Chess Set, Frank Brown — His first set of cord effigies (BandW)	£8.00
The Sailor and his Knots — A unique reprint of Ashley's 1925 work	£10.00
The String Zoo and The Cord Zodiac, Frank Brown — Many more ideas for small cord figures	£14.00
The Wee Lighthouse Knot, Pieter van de Griend	£4.00
Tramblings, *Desmond Mandeville* — Mandeville's work Reviewed and Edited by Geoffrey Budworth	£12.00
Turkshead Alternatives, Stuart Grainger — Decorative chains and grommets	£3.00
Turksheads the Traditional Way, Eric Franklin — A really useful introduction Reprinted 2022	£3.00
IGKT Car Window Sticker	£2.00
IGKT Cloth Blazer Badge — 8cm diameter	£5.00
IGKT Enamel Badge — 2cm diameter, Please specify clasp or pin fitting	£6.00
IGKT Photographer's Scale Card — indispensible for indicating the scale of a pictured subject	£1.00

Please e-mail your order to supplies@igkt.net stating your full postal address to which the items should be sent. We will then send you a request for payment (including postage and packing) so that you can pay securely by PayPal, online, using any card.

If you do not use e-mail, please contact:
IGKT Supplies Secretary, 10 Chine Avenue, Bittern, Southampton SO19 7JF UK